



Action for Warm Homes

IN FROM THE COLD:

The funding gap for non-gas fuel poor homes under ECO and a proposal to fill it

A report by National Energy Action for the gas distribution network companies:

National Grid Gas Distribution, Northern Gas Networks, SGN and Wales and West Utilities

February 2017

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1. Executive summary

Across Great Britain, households located in properties off the gas network are being left behind in the fight against fuel poverty. In particular, the UK Government's main scheme to provide heating and insulation measures to low income households – Energy Company Obligation (ECO) – is failing off-gas homes. National Energy Action (NEA) was commissioned by the four gas distribution network (GDN) companies to examine opportunities to address the non-gas gap under ECO and redirect support to vulnerable households who need it most. We make two proposals:

- **Proposal 1: UK Government meet the first time gas central heating shortfall under ECO2T.** NEA recommends the UK Government make immediate funds available for first time gas central heating systems to complete economic gas connections to fuel poor homes. NEA recommends setting the fund at £25 million per annum and reserving £37.5 million in the UK Government's spring 2017 budget to help cover the funding gap estimated at £43.5 million for first time gas central heating over the 18 month ECO2T transition period (April 2017 to September 2018). Eligibility for measures should be restricted to private tenure low income and fuel poor households in England and Wales, where the largest funding gaps exist. NEA estimates a £37.5 million non-gas fund could support around 9,375 households and deliver up to £142 million in lifetime bill savings.
- **Proposal 2: BEIS align the future fuel poverty obligation with fuel poor gas connections.** To ensure fuel poor non-gas homes are supported in proportionate numbers under the future fuel poverty obligation planned to succeed ECO from 2018, NEA recommends the Department of Business and Industrial Strategy (BEIS) require suppliers to meet a minimum target for installation of new central heating systems in non-gas properties that do not have one. The proposed sub-target could operate like the ECO solid wall minimum and will help secure delivery of cost-effective heating measures and fuel switching to low income off-gas households historically ignored under ECO. If the target was set at a level broadly equivalent to minimum delivery required under ECO for rural areas then NEA estimates lifetime bill savings of up to £955 million could be achieved in 63,000 properties over the course of the future obligation (2018-2022).

Non-gas homes addressed by these proposals contain some of the poorest, coldest and most vulnerable members of our communities: relying on more expensive fuels such as electricity to heat their homes, vulnerable to detriment in unregulated markets such as oil and more likely to live in the most energy inefficient and expensive-to-treat properties with no central heating and solid walls. These property characteristics can lead to annual fuel poverty gaps (the excess amount a fuel poor household needs to spend to keep warm compared to a typical household) of well over £1,000 in some cases. Failing to fund this gap and living in a cold home can cause or exacerbate illness amongst household members. For those on low incomes, attempting to meet this excess cost and achieve a warm home inevitably means compromising on other essential needs.

For many non-gas households suffering in cold homes a cost-effective solution is available: connection to the gas network and installation of first time gas central heating. Providing access to a cheaper and more reliable heating fuel (natural gas) will not only bring households out of fuel poverty but will also help UK Government to meet its energy efficiency and fuel poverty targets. At present however, the UK Government's main scheme to address fuel poverty across Great Britain, ECO, is not reaching off-gas homes. Our findings show:

- Historically ECO has failed to support non-gas households access affordable heating. This group, which comprises approximately 20% of the fuel poor population, has received only 1.4% of measures targeting low income and fuel poor homes under the Affordable Warmth element of ECO since the scheme began in 2013. This failure of ECO to fund heating solutions in off-gas properties is due to the UK Government's design of the scheme in which suppliers have been incentivised to discharge their Affordable Warmth sub-obligations on high scoring, low cost boiler replacements in on-gas properties.
- The funding gap under ECO for heating measures in non-gas homes is preventing other parties from delivering solutions to these properties. In particular, the number of fuel poor homes connected to GDNs' gas networks through Ofgem's fuel poor network extension scheme (FPNES) has declined. From 2011/12, when a high of 14,671 connections were made, to 2015/16 when a little over 12,000 fuel poor homes were assisted. A core reason for this decline has been an increasingly constrained funding landscape for new heating systems required to accompany gas connections to fuel poor homes.
- The funding gap for non-gas homes is particularly severe in England. This is demonstrated by national differences in fuel poor gas connections completed by GDNs under FPNES. At the halfway point of Ofgem's target of 91,203 connections by 2021, over 70% of connections targeted at Scottish and Welsh fuel poor households have been achieved. By contrast, England is lagging well behind with only 44% of connections completed. Feedback from GDNs indicates opportunities to fund heating measures through Welsh and Scottish Government-funded energy efficiency schemes is a key reason for improved delivery in these network areas.
- Moving forward, the gap in England will become even more severe with the closure of Central Heating Fund (CHF) in early 2017. This £25 million fund was a welcome move by UK Government to support first time central heating in English households. It has supported installation of a number of new gas heating systems in fuel poor homes over the past year. However resources were committed for 2015/16 only and no further funding has been made available by UK Government to continue or replace the scheme.
- Compounding the closure of CHF is an emerging funding gap of £43.5 million for first time gas central heating under the UK Government's new iteration of ECO. The 18 month extension of ECO (ECO2T) is part of a transition to a wholly fuel poverty focussed supplier obligation from 2018. Over this transition period (April 2017 to September 2018) the scale of ambition for first time central heating is limited to 4,000 systems. This falls far short of the number of vulnerable households targeted for a gas connection and central heating solution under FPNES. NEA estimates GDNs should deliver pro rata

14,864 connections to fuel poor homes over the ECO2T timeframe. A funding shortfall for 10,864 gas central heating systems therefore exists, equating to £43.5 million at £4,000 per system.

The proposals outlined above and in more detail in the report will help address this immediate funding shortfall and recharge delivery of fuel poverty solutions to vulnerable and previously ignored members of our community. Supporting this non-gas target group is in line with the UK Government's principle of prioritising the most severely fuel poor – many of whom live in expensive-to-heat and energy inefficient off-gas properties. The annual and lifetime bill savings from the proposals will help alleviate hardship in these households: particularly for members especially vulnerable to adverse health impacts from living in a cold home. Providing up-stream heating solutions to these individuals will not only improve their life chances but also reduce pressure on stressed health services.

Servicing non-gas households living in the worst housing stock will also assist the UK Government meet its fuel poverty targets. In particular, by reaching many of the 192,000 off-gas fuel poor living in F/G rated properties, the proposals will contribute to achieving the Government's milestone to lift fuel poor homes in England up to a minimum energy efficiency rating of Band E by 2020. Unless additional UK Government resources are made available, including the proposed £37.5 million non-gas fund, NEA estimates the fuel poverty target in England for 2020 will be missed. Both the problem and solution are clear. The next step is for the UK Government to commit adequate resources and take action to bring off-gas homes in from the cold.

2. Background

Since 2010, the impact of welfare reform and flat earnings growth on living standards, including the associated rise of food and fuel banks, has brought the struggle of millions of households across Great Britain to the attention of politicians and the media. Labelled variously as the working poor, squeezed middle and just-about-managing (so called JAMs), British households on low and limited incomes are often faced with stark choices each month about what costs to prioritise: from housing, childcare and digital access, to heating, food and other essentials.

Fuel poverty in off-gas homes

Many households in poverty are also in fuel poverty, when a home cannot be kept warm at a reasonable cost. Across Great Britain there are approximately 3.5 million fuel poor British households, around a fifth of which live in homes located off the gas grid (see Table 2.1).

Table 2.1. Fuel poverty in England, Scotland and Wales

	Number of fuel poor households	% of fuel poor households	Number of fuel poor households off the gas grid	% of fuel poor households off the gas grid	% of all households off the gas grid ⁴
England ¹	2,379,000	10.6	441,000	18.5	9.0
Scotland ²	748,000	30.7	141,000	18.9	16.0
Wales ³	291,000	23.0	NA	NA	14.0

¹ Figures relate to 2014 and use the low income, high costs definition of fuel poverty employed in England (DECC, 2016c)

² Figures relate to 2015 and use the 10% definition of fuel poverty employed in Scotland (Scottish Government, 2016c)

³ Figures are projected for 2016 and use the 10% definition of fuel poverty employed in Wales (Welsh Government, 2016a)

⁴ Figures are estimated for 2015 (Department for Business, Energy and Industrial Strategy (BEIS), 2016)

Properties without access to a mains gas connection contain many of the poorest and coldest households in Great Britain. The UK Government's most recent fuel poverty statistics¹ (DECC, 2016c) highlight this relationship between increased fuel poverty risk and living in an off-gas² home:

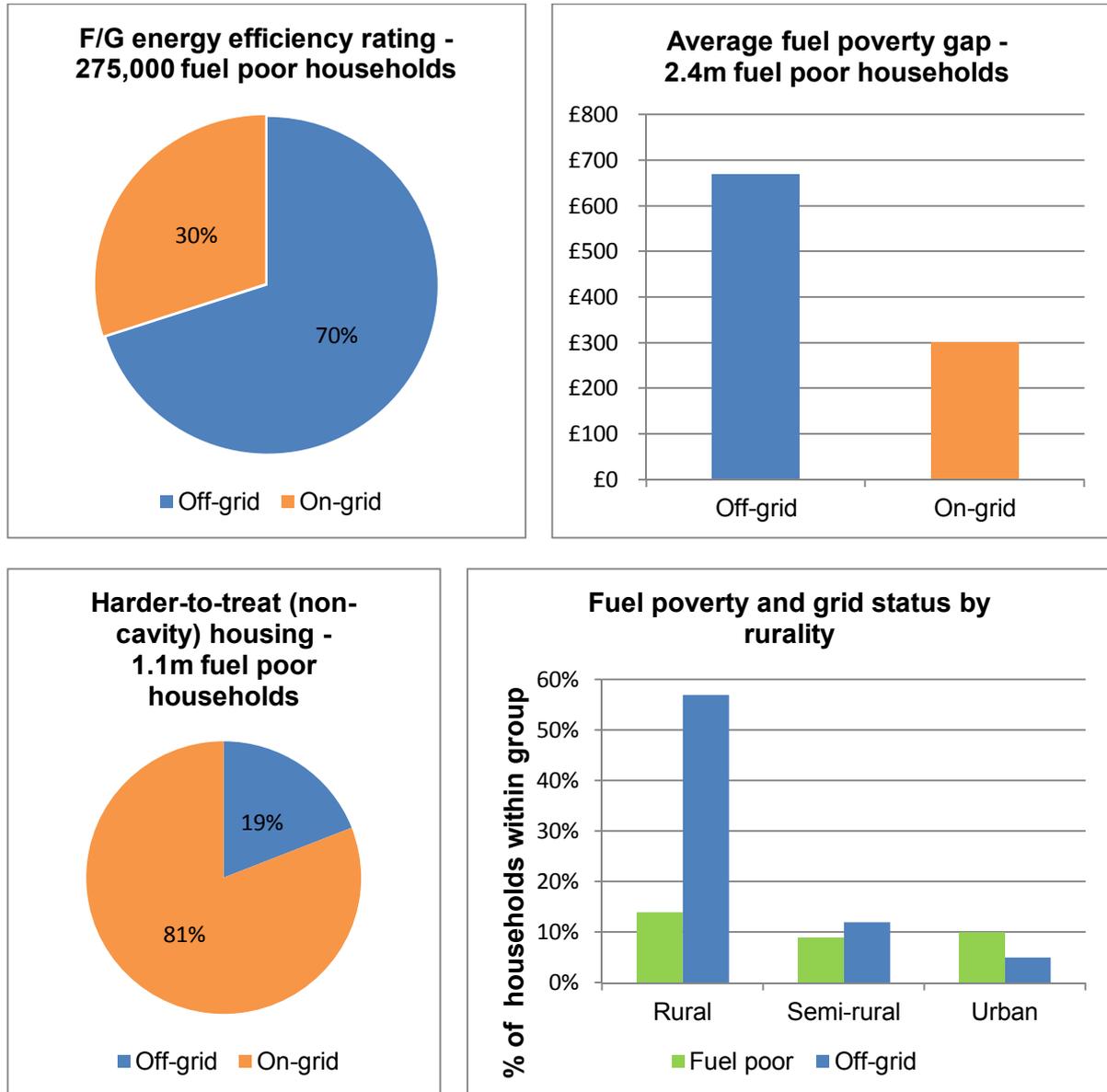
- **Off gas households are more likely to be in severe fuel poverty:** because they heat their homes with more potentially more expensive fuels such as electricity, fuel poor households off the gas grid experience, on average, excess fuel costs of £670 per year, more than double the average fuel poverty gap of the on-gas fuel poor (£302). Ofgem (2015c) found households that use electric heating tend to be on a lower income, with around a third in England having incomes of less than £14,500
- **The worst properties are more likely to be located off the gas grid:** 70% of F/G rated fuel poor properties (the least energy efficient housing) are off-gas. Over 70% of F/G properties have expensive and hard to treat solid walls and, on average, these homes face excess fuel costs of up to £1,345 per year. This is more than triple the average fuel poverty gap across A to D rated properties

¹ These statistics – the most detailed available – cover England only. However the characteristics of households at risk of fuel poverty are similar across Great Britain.

² Non-gas, off-gas and off-grid are used interchangeably throughout this report to refer to a household not connected to the mains gas grid.

- **Off-gas properties are more likely to be located in rural areas:** the extent of off-gas properties increases with increased settlement dispersal, with only around 5% of urban areas off-gas (Baker et al., 2008). Fuel poverty is more prevalent in rural locations than urban areas and rural households face a number of other pressures, including declining service provision and reduced employment opportunities

Figure 2.1. Fuel poverty indicators by gas grid connection



Source: The UK Government's Fuel Poverty Statistics for England, 2014 (DECC, 2016c). Figures on off-grid status by rurality were taken from Baker et al., 2008

Those living in a cold home are exposed to a range of negative impacts. In particular, premature death and ill health. People living in the coldest quarter of homes are a fifth more likely to die during winter than those living in the warmest properties (Wilkinson et al., 2001). Vulnerable groups include people with long-term disabilities and illnesses, pensioners and young children. For the latter, reduced educational attainment associated with fuel poverty has knock-on effects for social mobility and life chances (DECC, 2016a). Alongside productivity losses, cold-related illness is costing health services in excess of one billion pounds per year (Age UK, 2012).

UK Government fuel poverty strategy and targets in England

To address the scandal of cold homes, the UK Government introduced a statutory target in 2014 for as many fuel poor homes in England ‘as is reasonably practicable’ achieve a minimum energy efficiency rating of Band C by 2030.³ The Government has also committed to non-binding interim milestones of lifting fuel poor homes in England up to Band E by 2020 and Band D by 2025. Fuel poverty is a devolved issue and in Scotland and Wales neither country is on track to meet their targets of eradicating fuel poverty this decade.

As action is taken to reach the England target, the UK Government has stated non-gas households are a ‘key priority’ (HM Government, 2015: 45). In particular, the fuel poverty strategy for England, which outlines the Government’s overarching approach to tackling cold homes, sets out three guiding principles to direct policy and expenditure on England and Britain-wide fuel poverty schemes. These principles are well aligned to taking action in fuel poor off-grid properties, as outlined below:

Fuel poverty strategy principle	Alignment to fuel poverty off the gas grid
Prioritisation of the most severely fuel poor	Off-grid households are in more severe fuel poverty than those on the gas grid, with an average fuel poverty gap more than twice the size of the on-grid fuel poor (see Figure 2.1)
Supporting the fuel poor through cost-effective measures	Switching from a fuel such as electricity to gas to heat a home can lead to very significant bill savings for fuel poor households. Fitting gas central heating in an off-grid home is also relatively economical when compared to other measures required for this hard-to-treat group (in particular, solid wall insulation)
Ensuring that vulnerability is reflected in policy decisions	Those most at risk from living in a cold home are the very old, very young and people with a long-term health condition or disability. While such vulnerabilities occur across all household types, rural areas – which have a higher concentration of off-gas properties – also have a higher proportion of older people, many of whom will be particularly susceptible to the health impacts of a cold home

Given the ambition, it is necessary to now explore what action the UK Government is currently taking to service non-gas fuel poor homes across Great Britain.

³ The Fuel Poverty (England) Regulations 2014: <http://www.legislation.gov.uk/uksi/2014/3220/made>

3. Addressing fuel poverty in non-gas households

One of the most cost-effective solutions to fuel poverty in non-gas homes is connecting the property to the gas network and installing central heating. As Government itself recognises, this option can help cut bills and increase comfort in off-gas households who experience some of the most severe levels of fuel poverty (DECC, 2015). Connecting a vulnerable household to the network will enable them to access a relatively cheap, reliable and regulated form of energy – natural gas. The EUA (2017) estimates that, controlling for other factors, a connection to the grid is associated with a 64% reduction in the odds of being in fuel poverty.

For some properties, such as those located in remote rural areas far from existing gas networks, or homes in high rise flats where installing individual gas central heating systems is not feasible, options other than gas will need to be explored. However, for accessible properties in economic proximity to the existing grid, providing gas central heating is a key solution to addressing the high rates of fuel poverty experienced in off-grid homes. Other solutions for these households, in particular renewable heat, are often not accessible to poorer homes due to the prohibitive upfront costs of installing the technology. Furthermore, the UK Government’s scheme to support installation of such systems – the Renewable Heat Incentive (RHI) – is not currently directed at the fuel poor.⁴

Funding a gas connection: the role of gas distribution networks

Recognising the importance of gas heating as a solution to fuel poverty, Ofgem requires the four gas distribution network (GDN) companies to connect a certain number of fuel poor homes to the networks they own and manage. There are four⁵ companies covering eight network areas across Great Britain, outlined in Table 3.1 below.

Table 3.1. Gas distribution network areas and companies in Great Britain

Company	Areas covered
National Grid Gas Distribution (NGGD)	East Midlands, West Midlands, North West England, East of England (including North London)
Northern Gas Networks (NGN)	North East England (including Yorkshire and Northern Cumbria)
Wales & West Utilities (WWU)	Wales, South West England
SGN	Scotland, Southern England (including South London)

Gas connections to fuel poor homes are delivered under Ofgem’s Fuel Poor Network Extension Scheme (FPNES). The scheme operates by issuing a ‘voucher’ to an eligible household to cover the cost of a connecting the property to the gas network. Broadly, those eligible under the scheme are households who are in fuel poverty under the respective

⁴ The domestic RHI supports individual households deploy renewable and low carbon heating technologies through providing payments to households for seven years after installation, thereby rewarding the generation of clean heat. The scheme does not cover any upfront costs for installation however, effectively penalising fuel poor households who will not be able to access the capital required to fit micro-generation and renewable technologies.

⁵ Smaller companies located within areas covered by the four GDNs are called Independent Gas Transporters (IGTs).

measures used in the different nations, eligible for other government energy efficiency schemes or reside within a deprived area. See Annex A for Ofgem’s full eligibility criteria.

FPNES has been running since 2008 and is committed until at least the end of 2021. Connection targets are set by Ofgem at the start of each price control period. For the current RII0-GD1 price control mechanism 2013-2021, GDNs have a target of a minimum 91,203 fuel poor connections. Table 3.2 below breaks down the target by area and company.

Table 3.2 Fuel poor connection targets RII0-GD1 2013-2021

GDN	GDN area								Total	
	England							Wales		Scotland
	East	London	North West	West Midlands	North East	South	South West			
NGGD	12,046	2,880	13,330	8,360						36,616
NGN					14,500					14,500
WWU								12,590		12,590
SGN						10,367			17,130	27,497
										91,203

Source: FPNES Review Final Decision Document (Ofgem, 2015b)

Funding gas central heating: the role of government energy efficiency schemes

For a fuel poor household to benefit from a gas connection funded by FPNES they will require a gas central heating system to be installed in the property. This in-house work, including a gas boiler, radiators, heating controls and internal pipework, is generally more expensive than the cost of the connection. While GDNs cannot meet this cost through the fuel poor voucher issued under FPNES they and their fuel poor partners⁶ are required to secure funding for the heating system before a connection can proceed. Because a low income household will be unable to self-finance a new heating system, Ofgem expects government energy efficiency schemes to play a key role in funding the central heating measures. This is reflected in the FPNES eligibility criteria which was adapted to align with the criteria of other energy efficiency schemes (see Annex A).

Great Britain: ECO

Since 2013, the main energy efficiency scheme operating across Great Britain has been the Energy Company Obligation (ECO). ECO is the UK Government’s principal scheme for addressing fuel poverty. It operates as an obligation on the larger energy suppliers who are required to deliver a certain amount of carbon and energy bill savings through the installation of insulation, heating and other energy efficiency measures.

To date, ECO has proceeded in two stages, with a third stage and future fuel poverty obligation planned up to April 2022. As shown in Table 3.3, the amount of funding available for heating and insulation under the scheme has declined: from £1.3 billion per annum available in the first year of ECO1 (2013/14) to £640 million per annum committed for the 18 month ECO2T transition period (April 2017 to September 2018) and thereafter the future fuel poverty obligation (ECO3). This represents a reduction of £660 million per annum from the

⁶ Fuel poor partners work on behalf of GDNs to deliver connections under FPNES. Partners are nominated by GDNs and must be approved by Ofgem. Current fuel poor partners for each GDN are: NGGD – Affordable Warmth Solutions; NGN – Communitas Energy, YES Energy Solutions and Warm Zones; SGN – YES Energy Solutions; WWU: British Gas, Warm Wales and Flintshire Council.

original target although it is important to note that ECO budgets are notional, not actual, spend; reflecting what government expects it will cost suppliers to deliver their carbon and bill savings targets.

Table 3.3. ECO obligations 2013-2022

	ECO1		ECO2		ECO2T		ECO3			
	2013/14	'14/15	'15/16	'16/17	'17/18	'18/19 (Apr-Sept)	'18/19 (Oct-Mar)	'19/20	'20/21	'21/22
Notional spend (£m)	1,300	870	870	870	640	320	320	640	640	640
Spend targeted on fuel poor (Affordable Warmth) (£m)	350	310	310	310	450	225	320	640	640	640

Source: The Green Deal and Energy Company Obligation: Government Response (DECC, 2012) and ECO: Help to Heat Consultation Document (DECC, 2016a)

The component of ECO targeting low income and fuel poor households for heating measures is ECO Affordable Warmth. Notional spend is set at around £300 million, set to rise in coming years. This element of ECO could theoretically support installation of first time gas central heating to accompany a gas connection to an off-grid fuel poor home. To date however, suppliers have used this part of the scheme to deliver relatively cheaper boiler replacements in on-gas homes: around 90% of Affordable Warmth measures have been qualifying gas boiler replacements (DECC, 2016a).

England: Central Heating Fund

Recognising that ECO has failed to deliver heating measures into off-gas fuel poor homes, The UK Government made £25 million available in March 2015 for installation of first time central heating systems in fuel poor non-gas homes in England. Under this Central Heating Fund (CHF), grants ranging from approximately £100,000 to £6.5 million were awarded to 12 local authorities in a competitive bidding process.⁷ While central heating systems other than gas (e.g. a renewable system) may be funded, government has made it clear it expects 'CHF and FPNES will work in tandem, so that CHF can be used to fund the in-house works of those fuel poor households who are least able to make a contribution under FPNES' (DECC, 2015: 16).

Scotland: HEEPS

Since 2013, the Scottish Government has supported domestic energy efficiency under Home Energy Efficiency Programmes for Scotland (HEEPS) – an umbrella programme made up of a range of initiatives. The two key schemes targeting fuel poor homes are HEEPS: Area-Based Schemes (ABS) and HEEPS: Energy Assistance Scheme (EAS), recently rebranded as HEEPS: Warmer Homes Scotland.

⁷ The full list of funded bids is available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/458517/Successful_Central_Heating_Fund_Local_Authorities.pdf

Table 3.4. HEEPS funding for fuel poverty schemes in Scotland 2013-2018

	2013/14 ¹	'14/15 ²	'15/16 ³	'16/17 ⁴	'17/18 ⁵
HEEPS: Area-Based Schemes budget (£m)	55	60	65	50	est. 58
HEEPS: Energy Assistance Scheme \ Warmer Homes Scotland budget (£m)	16	16	est. 16	19	est. 16

¹Based on funding information from the HEEPS Delivery Report 2013/14 (Scottish Government, 2014)

²Based on funding information from the HEEPS Delivery Report 2014/15 (Scottish Government, 2016a)

³Based on funding information available here: <http://news.gov.scot/news/over-100-million-to-fight-fuel-poverty>.

The breakdown of EAS / Warmer Homes Scotland funding is not provided for 2015/16. As such, £16m is estimated based on the mean budget for this scheme

⁴Based on funding information from Scotland's Draft Budget 2016-17 (Scottish Government, 2015)

⁵Based on £74m capital funding announced for HEEPS for 2017/18 in the Scottish Draft Budget 2017-18 (Scottish Government, 2016b). The split between ABS and Warmer Homes Scotland is not specified. As such, £16m is estimated for Warmer Homes Scotland based on the mean budget for this scheme with the remainder allocated to ABS

Table 3.4 above shows that the Scottish Government has made approximately £70 million⁸ available per year for their fuel poverty focused schemes. While ABS is largely targeted on insulating hard-to-treat homes in deprived areas, the focus of EAS (now Warmer Homes Scotland) has been on installation of heating systems in private tenure households most vulnerable to fuel poverty. Of measures installed over the first ten months of the Warmer Homes Scotland scheme (September 2015 to June 2016), the most popular measure type (37% of all measures) were gas boilers. This equates to around three quarters of the 2,615 properties treated under the scheme receiving a new gas boiler (Scottish Government, 2016d). While it is not clear from HEEPS delivery reports what proportion of households receiving a boiler were previously off-gas, GDNs have informed NEA that Warmworks – the delivery agency for Warmer Homes Scotland – is supporting a substantial number of fuel poor connections in vulnerable private tenure homes in Scotland through the provision of fully funded first time gas central heating systems.

Wales: Warm Homes

In Wales, the Welsh Government supports households under Warm Homes, principally comprised of the Nest and Arbed schemes. Through Nest, on average £20 million (see Table 3.5) has been invested annually by the Welsh Government to deliver energy efficiency measures to low income private tenure households living in the worst housing stock.

Table 3.5. Welsh Government funding for Nest energy efficiency scheme 2013-2018

	2013/14 ¹	'14/15 ²	'15/16 ³	'16/17 ⁴	'17/18
Nest budget (£m)	16	18	25.5	18.5	NA

¹Based on funding information from the Nest Annual Report 2013-14 (Welsh Government, 2014)

²Based on funding information from the Nest Annual Report 2014-15 (Welsh Government, 2015)

³Based on funding information from the Nest Annual Report 2015-16 (Welsh Government, 2016b)

⁴Based on funding information provided to NEA by the Welsh Government

Measures delivered under the scheme are dependent on property need however central heating systems represent the majority of works undertaken and may include a full system if required (boiler, radiators etc.). In 2015/16 97% of Nest measures installed in approximately

⁸ This amount does not include funding the Scottish Government makes available for interest free loans to install energy efficiency measures in private tenure households.

6,000 homes were central heating systems and around one quarter of Nest measures were delivered to off-gas properties (Welsh Government, 2016b).

Alongside Nest, other Welsh Government-funded initiatives potentially supporting a gas solution for fuel poor off-grid homes include Arbed, which issues grants to local authorities to upgrade hard-to-heat and hard-to-treat homes in deprived areas. Measures delivered under the scheme have included solid wall insulation and fuel switching to gas. Moving forward, Nest is due to end in August 2017 however the Welsh Government has announced plans to replace it with a similar scheme. In addition, an extra £40 million in Welsh Government funding was announced in January 2017 to improve the energy efficiency of up to 25,000 homes across Wales.

4. The funding gap in non-gas fuel poor households

Across Great Britain, the number of non-gas fuel poor homes able to access an on-gas solution to fuel poverty is declining. Table 4.1 and Figure 4.1 show the number of fuel poor gas connections completed by GDNs across both price control periods – from 2009/10 to 2016/17 (year-to-date).

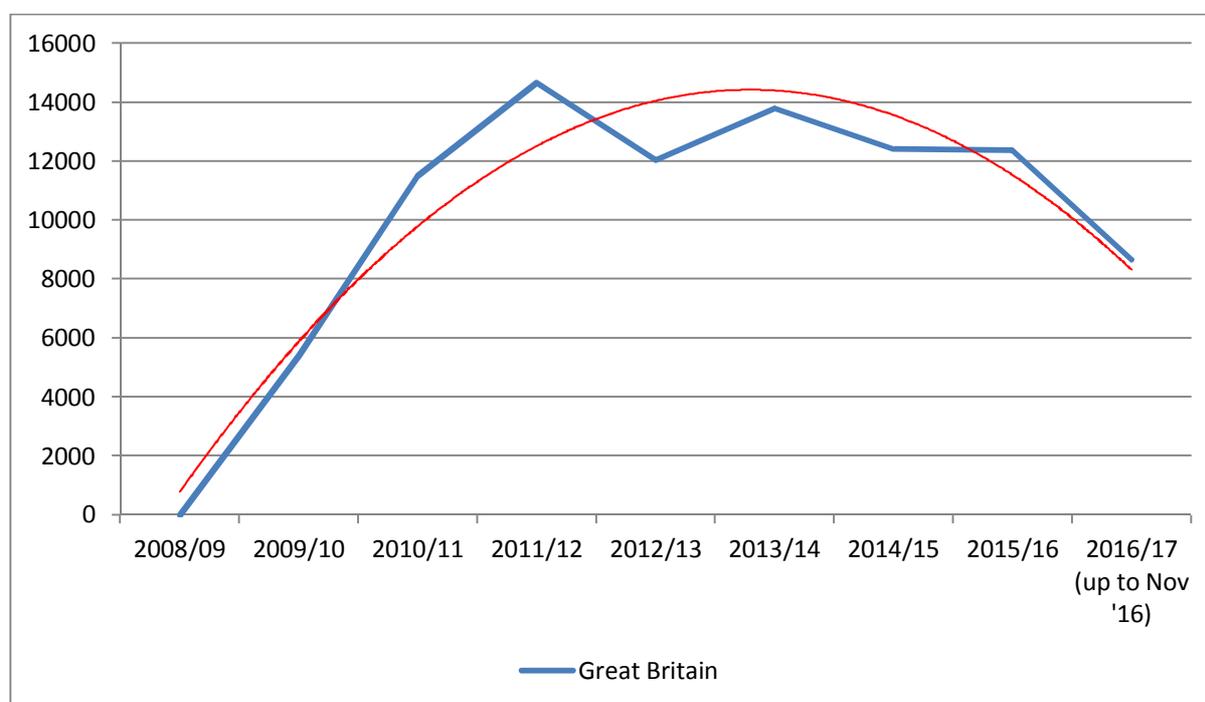
Table 4.1. Number of annual fuel poor connections 2009/10 to 2016/17

GDCR1	2009/10	2010/11	2011/12	2012/13
Great Britain	5,411	11,496	14,671	12,037
RIIO-GD1	2013/14	2014/15	2015/16	2016/17*
Great Britain	13,800	12,401	12,373	8,661

*Data was collected in December so it estimated figures for 2016/17 are up to end November 2016

Source: Historic connections under GDCR1 are from The Findings of Our Review of the Fuel Poor Network Extension Scheme (Ofgem, 2015a). Connections completed to date under RIIO-GD1 are based on data provided to NEA by the GDNs

Figure 4.1. Number of annual fuel poor connections 2008/09 to 2016/17



As can be seen, a general downturn in connections is taking place. A key reason for this downturn is an increasingly constrained funding environment for the gas central heating system required to accompany a connection to the grid. In particular, GDNs have informed NEA very few connections are taking place which are utilising ECO funds. Indeed, the design of ECO has created an acute gap in funding for non-gas households. This group, which comprises approximately 20% of the fuel poor population, has received only 1.4% of Affordable Warmth measures delivered to date. This disparity occurs due to the scheme's scoring methodology under which suppliers are incentivised to discharge their obligation at the lowest cost. Typically, the characteristics of a high-scoring, low-cost property are not aligned to those of an off-grid home. Figure 4.2 demonstrates this contrast.

Figure 4.2. Characteristics of a typical Affordable Warmth property compared to a typical off-gas property

Typical Affordable Warmth property	Typical off-gas property
<p>Low cost delivery:</p> <ul style="list-style-type: none"> ✓ Urban (easy-access) ✓ On-gas (no ancillary work required for gas boiler installation) ✓ Central heating (suitable for cheap ‘one-in-one-out’ boiler replacement) 	<p>High cost delivery:</p> <ul style="list-style-type: none"> ✗ Rural (hard-to-reach) ✗ Off-gas (gas connection required for gas boiler installation) ✗ No central heating (more expensive new heating system required)
<p>High scoring measure:</p> <ul style="list-style-type: none"> ✓ Replacement of faulty gas boiler scored from artificial electric heating baseline, leading to higher lifetime bill savings 	<p>Low scoring measure:</p> <ul style="list-style-type: none"> ✗ No boiler present – new heating system scored from actual savings, leading to lower lifetime bill savings
<p>✓ Suitable for Affordable Warmth heating measure</p>	<p>✗ Not suitable for Affordable Warmth heating measure</p>

As shown, ‘attractive’ properties for receipt of Affordable Warmth measures have been urban, on-gas properties with central heating systems in place. These types of homes are easy to access and are suitable for relatively cheap ‘one-in-one-out’ boiler replacements. By contrast, most off-gas properties are located in rural areas and may require pre-installation work (a gas connection) and costlier measures (a full heating system). Additionally, if the previous gas boiler is broken it is deemed a ‘qualifying’ boiler and the lifetime bill savings of the gas boiler replacement are calculated from an artificial baseline of electric room heaters. Because the unit price of electricity is around triple that of gas this leads to an inflated lifetime bill savings score. By contrast, installing a gas boiler into an off-grid home where there was previously no boiler present calculates *actual* cost savings, generally leading to a lower score and therefore making the measure less attractive to deliver.

The ECO funding gap in off-gas homes, combined with increasingly constrained local authority and social housing budgets, is leading to connections being cancelled or unable to proceed. For example, one GDN cited around 610 connections as part of 12 projects which were cancelled over the past two years due to insufficient funds for new heating systems. When an eligible connection is cancelled a household which could have been lifted out of fuel poverty remains living in a cold home.

Funding gap in England

The funding gap for heating measures is having a particularly severe impact on gas solutions for fuel poor households in England.

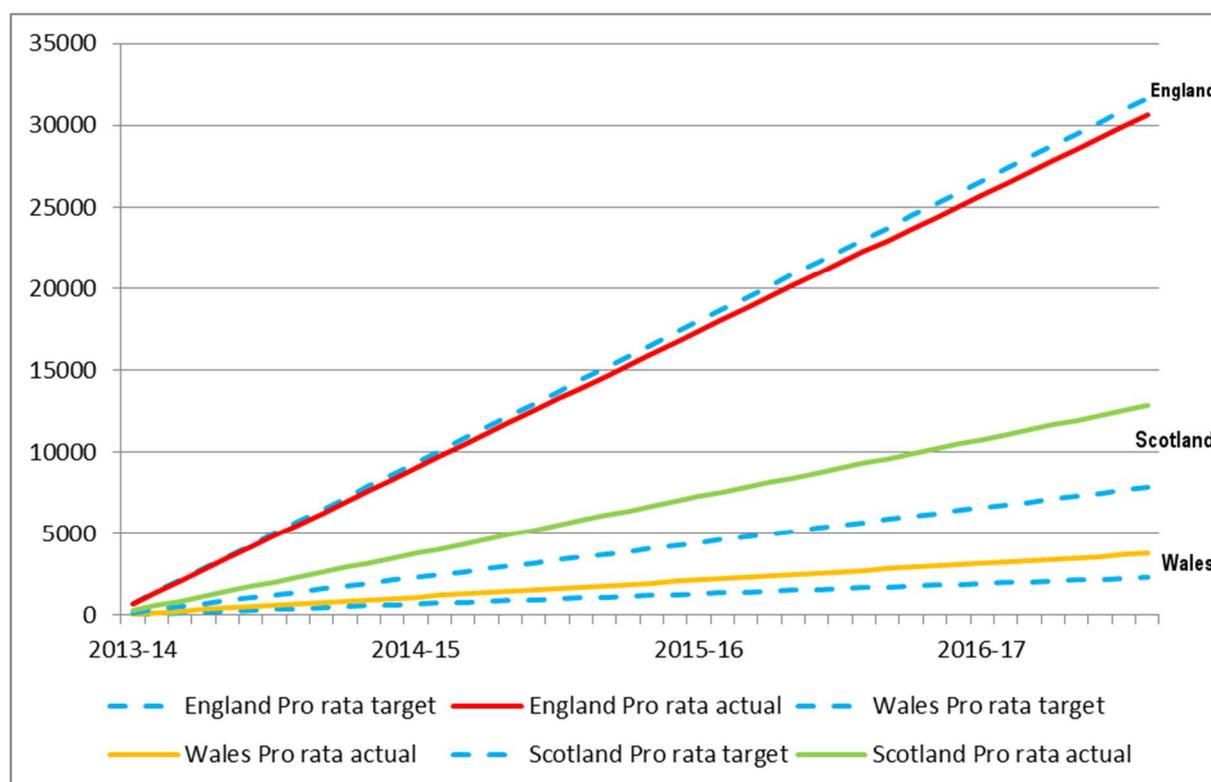
Table 4.2. Number of fuel poor connections completed under RIIO-GD1

	2013/14	'14/15	'15/16	'16/17*	% of target completed
England	7,377	7,638	8,875	6,722	44
Wales	1,440	1,064	882	404	75
Scotland	4,983	3,699	2,616	1,535	75
Great Britain	13,800	12,401	12,373	8,661	52

*Data was collected in December so it estimated figures for 2016/17 are up to end November 2016
Source: NEA calculations based on data provided by GDNs

As Table 4.2 shows, although GDNs are around halfway to meeting their April 2021 target of 91,203 connections, progress at the national level is mixed. In particular, connections in Wales and Scotland are far ahead of England. With four years remaining to the 2021 target, over 70% of the Scottish and Welsh sub-targets of 17,130 and 5,036 connections respectively have been achieved.⁹ By contrast, only 44% of connections targeted for England have been completed.

Figure 4.3. Cumulative number of fuel poor connections in Scotland, Wales and England under RIIO-GD1



Source: Pro rata monthly connection targets were calculated based on fuel poor connection targets for the different network areas specified in the FPNES Review Final Decision Document. Pro rata actual connections were calculated based on data provided to NEA by the GDNs

⁹ The Scottish sub-target of 17,130 connections is specified by Ofgem in its FPNES Review Final Decision Document. The Welsh sub-target of 5,036 connections is estimated based on delivery of 40% of the WWU sub-target of 12,590 connections in Wales. This estimation is informed by feedback provided to NEA by WWU.

This disparity across the nations is highlighted in Figure 4.3 above. The graph compares target versus actual connections in Scotland, Wales and England at a pro rata rate of delivery. It shows Scotland and Wales tracking ahead of their target rates in cumulative connections to date. Feedback from GDNs indicates a more attractive funding landscape in the devolved nations is a significant reason for improved delivery in these network areas. In particular, funding for heating measures which is available to off-gas private tenure homes through the Nest and Warmer Homes Scotland schemes. Not only are additional homes supported through these programmes but the schemes developed are able to attract matched ECO funding. Because of this, proportionally more ECO measures have been delivered in Scotland and Wales than in England: 81 out of every 1,000 households are in receipt of ECO measures in Scotland, compared to 59 in Wales and 58 in England (BEIS, 2017c).

Contrasting the approach of the devolved governments, the UK Government has provided no recurrent funds to support domestic energy efficiency in England since the closure of the former Warm Front scheme in 2013. This lack of recurrent government funding, together with the funding gap for non-gas homes that has emerged under ECO, has detrimentally impacted the delivery of gas solutions to fuel poor off-grid homes in England. While CHF has been welcome in filling this gap and supporting a number of new gas central heating installations over the past year, no government resources have been committed to continue or replace the scheme. As such, NEA is concerned a new funding gap is emerging for the poorest non-gas households which will endure and expand under future iterations of ECO.

Funding gap in transition to new fuel poverty scheme

The UK Government has announced plans to shift ECO to a scheme wholly focused on heating and insulation for low income and fuel poor households from 2018 (ECO3). As part of this move, an 18 month transition period (ECO2T) has been announced. Changes to the scheme for this transition period have been made partly to support delivery of more measures into fuel poor non-gas homes (BEIS, 2017b). They include:

- Capping the installation of mains-gas ‘qualifying’ boiler replacements under Affordable Warmth at the equivalent of 25,000 per year
- A greater focus on heating and insulation measures for low income and fuel poor households through increasing the Affordable Warmth obligation as a proportion of the overall scheme (from 36% to 70% of estimated supplier spend)
- Introducing ‘flexible eligibility’ which will allow suppliers to achieve up to 10% of their Affordable Warmth target during the transition period through installing measures in households identified by local authorities
- Introducing a rural sub-obligation of 15% under CERO, to safeguard delivery in rural (including off-gas) areas. No rural sub-obligation applies to Affordable Warmth but the scoring uplift of 45% for Affordable Warmth heating measures installed in non-gas properties will be retained

For fuel poor off-gas homes living in severe fuel poverty, and where a connection to the gas network represents a cost-effective solution, it is important to understand whether these changes to ECO will be sufficient to drive installation of first time gas central heating.

Examining the impact assessment for ECO2T, BEIS (2017a) expects 4,000 first time central heating systems will be installed in Affordable Warmth eligible homes over the 18 month transition period. This represents only 1.3% of Affordable Warmth activity. By contrast, over 80% of Affordable Warmth measures modelled for uptake during ECO2T are insulation; a measure which may complement but cannot replace gas central heating as the most cost-effective and high-impact option for many non-gas homes. Furthermore, only 16% of Affordable Warmth delivery is expected in properties not connected to the gas grid.

Comparing the scale of ambition for installation of heating measures in non-gas properties under ECO2T with targets for delivering a gas connection and central heating solution to fuel poor homes under FPNES, a large funding gap is evident. NEA estimates from April there will be approximately 39,638 connections remaining for GDNs to complete their minimum RIIO-GD1 target of 91,203 connections by 2021. This equates to pro rata 14,864 connections required over the 18 month ECO transition period (April 2017 to September 2018). Assuming, as per BEIS's impact assessment, that 4,000 fully funded first time central heating systems are installed under ECO2T, this leaves a shortfall of 10,864¹⁰ gas central heating systems required to complete a pro rata share of the remaining RIIO-GD1 target.

For fully funded gas central heating systems NEA estimates a cost of £4,000 per property. This includes all measures associated with first-time gas central heating (boiler, radiators, pipework) but excludes the cost of the gas connection, which is assumed to be funded under FPNES. This figure is based on stakeholder feedback and is in line with the amount estimated by EUA (2017). At £4,000 per system NEA therefore estimates a gap of £43.5 million exists over the ECO transition period for gas central heating in off-grid fuel poor homes. These calculations are outlined in Table 4.3 below.

Table 4.3. Funding gap for first time gas central heating systems to deliver RIIO-GD1 fuel poor connections during ECO2T, April 2017 to September 2018

Connections completed RIIO-GD1 ¹	Remaining up to 2021 target	Pro rata delivery required ECO2T (Apr-17-Sept-18)	Expected number first time central heating funded under ECO2T ²	Central heating gap	Funding gap (£m) ³
51,565	39,638	14,864	4,000	10,864	43.5

¹ Estimated up to end March 2017

² From ECO: Help to Heat Final Stage Impact Assessment (BEIS, 2017a)

³ Based on £4,000 for a first time central heating system (excluding the gas connection)

While some of this £43.5 million gap can be filled by third parties such as social housing providers, a shortfall is apparent in private tenure homes. This shortfall is particularly acute in England: 70% of FPNES connections are targeted for England yet CHF is closing and no UK Government funding is committed for heating or insulation in England from 2017/18. A solution is therefore needed to fill this funding gap and support the poorest households access a cheaper form of heating.

¹⁰ This shortfall of 12,650 is based on the generous assumption that all 4,000 central heating systems installed under ECO2T are used to support fuel poor gas connections under FPNES.

5. A smart way of filling the gap

The households targeted for support in this report and which fuel poverty schemes have so far failed to reach contain some of the most vulnerable people in Great Britain. Sketching profiles of the off-gas fuel poor reveals an older age couple with health conditions living in an F-rated property and facing excess fuel costs of more than £1,000 per year. Or, a family living in a large and leaky expensive-to-heat house in a deprived rural area in which declining services and limited job opportunities compound hardship. In the city meanwhile, a single working poor adult may be occupying a poor quality privately rented flat and reliant on expensive electric room heaters to keep warm.

For such households, many of whom are stretched to afford their daily needs, self-financing a new heating system or accessing private finance through loan and other schemes is often not a suitable or accessible option. Instead, what is required for this target group is better alignment of UK Government fuel poverty policy with Ofgem's fuel poor gas connection scheme. This will ensure at a minimum the 91,203 fuel poor homes targeted by Ofgem for a cost-effective gas solution are able to benefit by the 2021 target date. To meet this minimum and support vulnerable off-gas homes, NEA outlines two proposals:

1. UK Government-funded proposal focusing on the immediate shortfall in funds for first time gas central heating under ECO2T
2. Longer-term proposal focused on aligning the future fuel poverty obligation (ECO3) with fuel poor gas connections

Proposal 1: Meeting the first time gas central heating shortfall under ECO2T

Overview	£37.5m non-gas fund for first time gas central heating systems
Funding	£25m p.a. (£37.5m over the ECO2T transition period)
Timeframe	April 2017 to September 2018
Eligibility	England and Wales: private tenure low income and fuel poor households
Delivery	GDNs and their fuel poor partners
Measures	First time gas central heating
Complementary measures	Gas connection, cost-effective insulation, energy efficiency advice, referrals for support
Alignment	FPNES (gas connection), ECO2T (insulation), Warm Homes (Wales only), local partner schemes (advice and onward referrals)
Households supported	9,375
Annual bill savings	£1.3m to £11.8m ¹¹
Lifetime bill savings	£15m to £142m

¹¹ Savings range from replacing an oil boiler to replacing electric room heaters and are illustrative for a 3-bed semi-detached house with solid walls. Savings are based on Ofgem's deemed scores: <https://www.ofgem.gov.uk/publications-and-updates/response-eco-deemed-scores-consultation>

As detailed in Chapter 4, a funding gap of £43.5 million is estimated for first time gas central heating over ECO2T. Assuming a portion of this gap will be met by third parties, in particular social landlords, funding is still needed in private tenure homes. Connections in this tenure are where the greatest impact on fuel poverty can be made: together, owner occupiers and private renters comprise 81% of all fuel poor households and have larger average fuel poverty gaps relative to those living in social housing (DECC, 2016c).

Non-gas fund

To support this target group, NEA proposes a £37.5 million non-gas fund. This fund should cover installation of first time gas central heating in private tenure non-gas homes over the ECO transition period, equating to £25 million per annum. This amount is equivalent to CHF, which has now closed. NEA recommends funding for this proposal is made available in the UK Government's next budget. Historically, supplier-funded obligations have not been successful in supporting hard-to-treat (including off-gas) homes. Instead, bespoke government-funded schemes, such as the previous Warm Front programme in England, are needed to drive energy efficiency measures in these properties.

Eligibility

NEA proposes the non-gas fund is limited to households in England and Wales. Fuel poverty policy is further devolved in Scotland and the Scottish Government is expected to continue supporting fuel switching and first time central heating under Warmer Homes Scotland. In targeting the majority of funds for England, where the greatest number of fuel poor connections remain to be completed, this fund will also help correct a regional imbalance in support for off-gas homes across Great Britain.

Household eligibility could align with ECO Affordable Warmth (excluding social housing). In addition, the potential to utilise ECO2T local authority flexible eligibility mechanisms or the equivalent should be explored. Using these mechanisms and working with local partners will help ensure the fund finds and supports the most vulnerable fuel poor households off the gas grid; for example those with health conditions impacted by living in a cold home. Government (BEIS, 2017b) is of the view such mechanisms will help to identify and target harder-to-reach households who live in deep rural areas. Feedback from stakeholders working on the delivery of ECO has shown that properties in more isolated villages and hamlets can be hard-to-reach for receipt of energy efficiency measures. This is both because of their remote location – which presents a barrier to hearing about fuel poverty schemes and imparts higher delivery costs on suppliers – as well as the more expensive measures needed in many rural properties (including fuel switching) (NEA for Citizens Advice, 2016). Identifying these households through local partners and passporting them for receipt of heating through the non-gas fund could therefore help support a previously ignored group.

Number of households supported

NEA estimates a £37.5 million fund could support an approximately 9,375 households (6,250 per year). This number assumes that the central heating solution will be fully funded (at £4,000 per system) and is based on the rationale that households targeted will be unable to self-fund and properties chosen will not be economical for receipt of measures under other schemes. However, where the fund can fill gaps under these schemes, such as ECO, and

leverage in funding from them, more households can be supported. As such, the fund administrator should encourage blending across schemes to find the most cost effective and comprehensive solution for the fuel poor household.

Measures

NEA assumes funds under this proposal are reserved for first time gas central heating systems to support gas connections to fuel poor households in line with Ofgem targets. It is important to note that before making a fuel poor connection under FPNES GDNs are required to check that a gas connection is the best option for the eligible household and no other fuel option, including renewable heat, would be more appropriate. As such, connections and installations carried out using this fund would be targeted effectively at eligible households.

Alongside central heating, households supported under the fund could access a whole-house solution where cost-effective. In particular, installing insulation will help maximise bill savings for the household along with increasing a property's energy efficiency rating. Funding for insulation could be drawn from ECO2T or Welsh Government schemes, where available.

Delivery

Under CHF, grants were discharged to local authorities as part of a competitive bid process. This approach restricted access to households falling within a bid scheme's geographic target area. A more accessible model could be to discharge funds to GDNs working with local authorities. GDNs cover all of England and Wales and are well-placed to deliver an integrated solution for fuel poor households (connection, central heating, complementary measures). Through managing the end-to-end connection and installation work a GDN's fuel poor partner (e.g. Warm Zones) is able to streamline and simplify the customer journey; critical for the most vulnerable households.

Due to Ofgem's incentives framework¹² GDNs have been encouraged to develop partnerships with local and charitable organisations to support their fuel poor customers. As such, the gas network companies should be well-placed to work with local authorities and other local partners to identify vulnerable households that could benefit from the fund. This may include off-gas homes containing someone with a health condition or a family with very young children. Working with these partners, the solution for a vulnerable household can then extend beyond the capital measures to include education on using the new heating system, wider energy efficiency advice, as well as referrals on for additional support such as income maximisation services.

Longer-term funding

While the focus of this fund is initially on the 18 month ECO2T transition period, in the longer term, consideration should be given to extending the fund to cover the duration of the RIIO-GD1 price control period (until April 2021). This will support GDNs to exceed their RIIO-GD1 targets, with a focus on improving the worst off-grid properties in England. Specifically, the

¹² Stakeholder Engagement Incentive and Discretionary Reward Scheme, see: https://www.ofgem.gov.uk/sites/default/files/docs/2014/12/gas_drs_15_decision_letter.pdf.

192,000 off-gas fuel poor living in F/G rated homes. Servicing this target group will help Government meet its 2020 interim fuel poverty milestone in England.

Proposal 2: Aligning the future fuel poverty obligation with fuel poor gas connections

Overview	Introduction of a sub-obligation in the future fuel poverty obligation to require suppliers to meet a minimum target for installing new central heating systems in non-gas properties that do not have one
Notional spend	£72m p.a. (illustrative only) ¹³
Timeframe	October 2018 to March 2021
Eligibility	Great Britain: Capped in social housing with a clear focus on private tenure non-gas homes without central heating eligible under the new obligation's fuel poverty focused criteria
Delivery	Suppliers (with scope to discharge delivery to GDNs and their fuel poor partners)
Measures	New central heating systems
Complementary measures	Gas connection, cost-effective insulation, energy efficiency advice, referrals for support
Alignment	FPNES (gas connection), HEEPS (Scotland only), Warm Homes (Wales only), local partner schemes (advice and onward referrals)
Households supported	18,000 per year (illustrative only) ¹⁴
Annual bill savings	£79.5m (illustrative only) ¹⁵
Lifetime bill savings	£955m (illustrative only)

While ECO2T is now final, an opportunity exists to align the future fuel poverty obligation (ECO3) with fuel poor gas connections required under FPNES. Government intends the future supplier obligation to focus on low income households living in the most inefficient properties, with better targeting of the fuel poor. This will be achieved through improved data matching and data sharing.

Minimum target for new central heating systems in non-gas homes

To ensure fuel poor non-gas homes are supported in proportionate numbers under the new obligation, NEA recommends suppliers are required for ECO3 to meet a minimum target for installation of new central heating systems in non-gas properties that do not have one. Without this sub-obligation the future scheme risks cost-effective and high-impact heating solutions being crowded out by lower cost insulation and cheaper boiler replacements. Current mechanisms to support households targeted by this proposal are (if continued) not

¹³ Based on installation of 18,000 fully-funded gas central heating systems at £4,000 per system.

¹⁴ Based on 15% of transition period Affordable Warmth target of £1.84 billion annual lifetime bill savings being met through installation of new gas central heating systems in properties previously heated by electric room heaters (assumed property type 3-bed semi-detached house with solid walls).

¹⁵ Savings are illustrative for replacing electric room heaters in 63,000 properties over the course of ECO3 (18,000 per year) with gas central heating in a 3-bed semi-detached house with solid walls. Savings are based on Ofgem's deemed scores: <https://www.ofgem.gov.uk/publications-and-updates/response-eco-deemed-scores-consultation>.

adequate to drive the heating solutions required for many off-gas homes. In particular, the non-gas uplift operating for Affordable Warmth measures does not apply where a non-gas household is switched to gas. In addition, both the rural sub-obligation and gas boiler replacement limit can be complied with through insulation measures. By contrast, a minimum new central heating target will deliver efficient systems and fuel switching to low income households historically ignored under Affordable Warmth. This will help redress the balance of bill savings to fuel poor off-grid homes.

Eligibility

Household eligibility for the future obligation is expected to be restricted to low income households with better targeting of the fuel poor. From within this group NEA recommends new central heating installed in social housing is capped under the proposed minimum target. It is important to recognise the rationale for the minimum target is to steer support to households living in severest fuel poverty who have not benefited from energy efficiency schemes to date. Such homes are by and large F/G rated properties in private tenure where those on the lowest incomes are unable to make self-contributions or access third party funds.

Measures

Installations funded under the target should be limited to new central heating systems in non-gas properties that do not currently have a central heating system installed. Recognising Government's intention to support innovation in the new obligation, eligible measures could include a range of technologies – gas boilers but also renewable and other systems. In this way, the target will not only improve alignment of ECO3 with FPNES but also support Government's wider carbon reduction goals.

Alongside a minimum heating target, Government may decide to continue a rural sub-obligation or solid wall minimum. Where cost-effective, these requirements can work together to deliver a whole-house solution to a property (e.g. insulation and heating) along with driving ever greater investment in hard-to-treat and hard-to-reach properties needed to meet national fuel poverty targets. Investment for insulation to accompany a new heating system should be leveraged in from other policy drivers; for example targeting private landlords to make contributions under the private rented sector regulations applying to England and Wales.

Number of households supported

The number of households supported depends on the size of the target, which will be constrained by the Government's commitment to insulate one million homes over the course of this Parliament (The Conservative Party, 2015). BEIS (2017a) estimates 865,000 homes will be insulated up to September 2018, leaving 135,000 properties to be treated by May 2020. At an expected rate of 333,000 homes insulated per year under ECO2T, this leaves Government well on track to both meet their manifesto commitment and reorient the future obligation away from a singular focus on low cost insulation.

As an example, a minimum target for new central heating in non-gas homes could be set at a level broadly equivalent to minimum delivery required for solid wall insulation (19%) and rural areas (15%) under the CERO ECO2T target. Comparatively, if 15% of the annual

Affordable Warmth transition target of £1.84 billion lifetime bill savings was achieved through fully funded new gas central heating systems in properties previously heated by electric room heaters this would equate to around 18,000 households supported per year.¹⁶ This is an illustrative example only; any minimum target will have to be set in consultation with stakeholders. However, it does give an indication of the impact a minimum target could make in non-gas homes; where, currently, only 4,000 first time heating systems are expected to be delivered over the next 18 months.

Scheme alignment and delivery

To support delivery of this proposal priority should be given to aligning ECO3 with fuel poor connections made through FPNES. In particular, opportunities exist to learn lessons from CHF where barriers emerged to blending funding across the two schemes. NEA understands delays to installation impacting on a customer's journey were caused by recurring and competing household and property eligibility checks required under FPNES and ECO. If the schemes are instead designed to work together, actions can progress more smoothly: all the way from an eligibility check to post-installation energy advice.

To facilitate this end-to-end solution a supplier or GDN would ideally be able to access funding direct from FPNES and ECO; helping reduce cross-scheme complexity delivery costs. Utilising ECO's proposed flexible eligibility mechanism could also help reduce costs associated with identifying suitable properties. Not only can local authority schemes find and refer very vulnerable and isolated households but, if Government decides to extend flexible eligibility from ECO3 to allow other intermediaries to passport fuel poor households for assistance, then GDNs and their fuel poor partners could potentially refer in or accept households from suppliers for a gas connection and central heating solution. If, as recommended, FPNES-ECO fragmentation is addressed, GDN-supplier resources are pooled, delivery is streamlined and better use is made of data sharing and local partners to find households; then, any additional cost burden associated with this proposal will be mitigated. At the same time as directing savings to the most inefficient properties.

Impacts

The proposed solutions will have immediate and longer-term benefits at both the individual and society level, and help to address the Government's wider priorities for supporting people on low incomes, upgrading infrastructure and delivering affordable energy in the move towards a low carbon economy.

Household benefits

Installing new central heating systems, particularly in homes that previously relied on expensive room heaters, is one of the most cost-effective solutions for a fuel poor household. The annual and lifetime bill savings from the two proposals will go a long way to maximising the income of the working poor and very vulnerable in our society; ensuring they can meet their other essential needs as well as having greater purchasing power to support economic activity in deprived and rural areas.

¹⁶ Figures are illustrative for a 3-bed semi-detached house with solid walls and based on Ofgem's deemed scores: <https://www.ofgem.gov.uk/publications-and-updates/response-eco-deemed-scores-consultation>.

Households connected to the grid and using efficient central heating will also be able to keep warmer for less. This improvement in thermal comfort has associated health benefits. For example, in one study where an English estate in Belgrave was connected to the gas grid, a marked increase was identified in vulnerable residents' health and wellbeing (Children's Society & NEA, 2015). Reducing ill health from the cold, damp, mould and mental stress associated with trying and failing to keep a non-gas home warm will not only benefit households but reduce the burden on health services, in particular the under-pressure NHS.

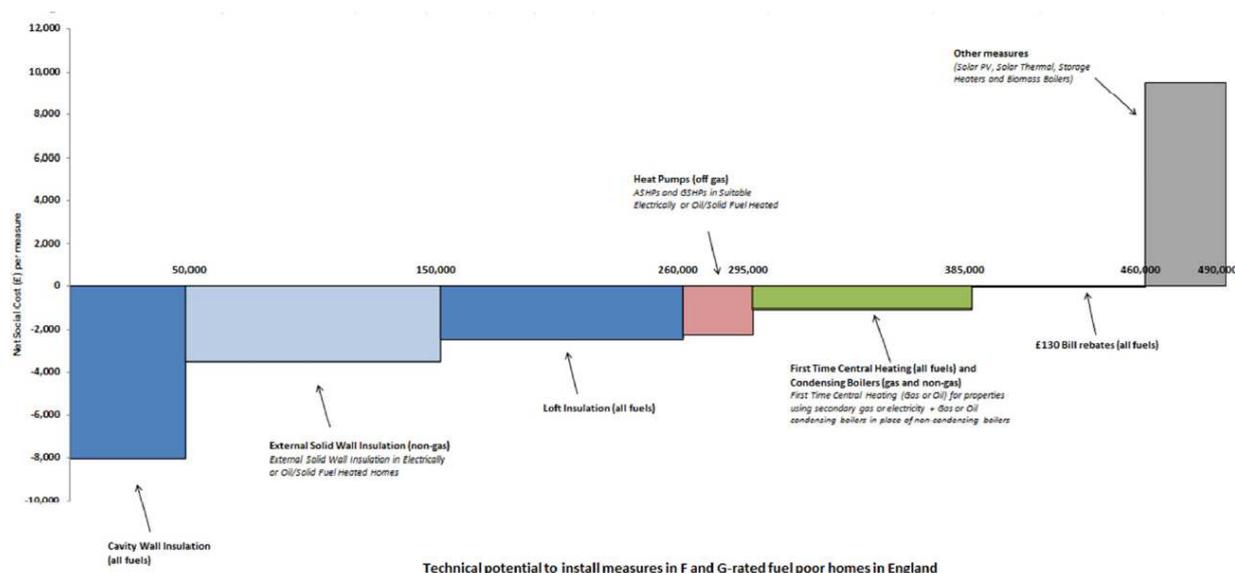
Contribution to UK Government energy efficiency policy and fuel poverty targets

Both proposals in this paper have been designed to reflect and align with broader UK Government energy efficiency and fuel poverty priorities and principles. In particular:

- **UK Government commitment to insulate one million homes by 2020:** Proposal 2, which recommends reserving a portion of the future supplier obligation to support new central heating systems, does not crowd out lower cost and solid wall insulation. In addition, both proposals recommend installation of insulation alongside a gas connection and central heating where cost-effective and funding can be leveraged from third party sources such as ECO, landlords, local authorities and health commissioners. This will maximise energy efficiency outcomes as well as household bill savings.
- **Minimum energy efficiency standards for the private rented sector:** Both proposals are targeted at private tenure non-gas homes living in F/G rated properties. To the extent delivery can reach private rented sector (PRS) homes they will contribute to meeting regulations introduced in England and Wales for PRS properties to achieve a minimum E rating by 2020 (all tenancies).¹⁷ Targeting of PRS homes under these proposals can be supported by providing GDNs and suppliers with access to Government data identifying inefficient and vulnerable homes and matching it with other critical data sets such as the non-gas map. This data sharing is in line with Government's emphasis on improved targeting of the fuel poor and could be supported by clauses in the Digital Economy Bill, currently passing through Parliament.
- **Interim fuel poverty target in England:** To meet the UK Government's interim 2020 fuel poverty milestone in England fuel poor homes living in Band F and G properties must be upgraded to at least an E rating. This is an important step in making progress towards the statutory 2030 target and reflects the Government's principle of prioritising the most severely fuel poor. Modelling for the Committee on Climate Change (CSE, 2014) estimates 488,000 fuel poor homes in F/G dwellings will need to be treated by the 2020 deadline. DECC meanwhile has produced the marginal alleviation cost curve shown in Figure 5.1 that estimates the potential to install measures in F/G rated fuel poor homes in England, and the cost effectiveness of those measures compared to each other.

¹⁷ The Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015: <http://www.legislation.gov.uk/ukdsi/2015/978011128350/contents>.

Figure 5.1. Fuel Poverty Marginal Alleviation Cost Curve for F/G rated fuel poor homes in England



Source: DECC analysis of the English Housing Survey (DECC, 2016b)

As shown, installation of first time central heating has an important role to play alongside insulation. This measure is particularly useful for the 70% of F/G rated fuel poor properties located off the gas grid. Targeting these homes for economic on-gas solutions will help Government to meet its 2020 target. Fuel switching and new central heating will not only move non-gas households up energy efficiency band ratings but will also have a large impact on their fuel poverty gaps (in excess of £1,000 if some G-rated off-grid households).

It is important to recognise that redistributing future ECO funds (as per Proposal 2) will not alone be sufficient to support non-gas homes living in the worst properties. Indeed, the Committee on Fuel Poverty (2016) has estimated a funding gap exists to meet the 2020 Band E fuel poverty milestone in England of over £1 billion. They have called on government to take urgent action to address this gap and ensure funding and programmes are in place to achieve the initial milestones and 2030 target. Proposal 1 makes a small but significant contribution to filling this £1 billion gap. Unless government resources are made available, including the proposed £37.5 million non-gas fund, NEA estimates the fuel poverty target in England for 2020 will be missed. If this milestone is not met, it is unlikely Government will be able to honour the legally-binding 2030 target.

6. Conclusion and recommendations

This report has explored opportunities and challenges to supporting non-gas fuel poor households in Great Britain. In particular, the potential to deliver a cost-effective and high impact gas solution to these homes through connecting them to the network under Ofgem's fuel poor scheme, FPNES, and then install gas central heating through the UK Government's principal energy efficiency scheme, ECO.

Our findings show that the existing and historical misalignment of ECO with FPNES is having a detrimental impact on bringing vulnerable households on-grid. Off-gas homes have received only 1.4% of Affordable Warmth measures delivered under ECO to date. This is nowhere near their proportionate share.

This failure of ECO to support first-time gas central heating is preventing GDNs from delivering a cheaper and more reliable form of energy to households that are experiencing some of the most severe levels of fuel poverty. Specifically, without ECO funds, there are limited pathways to secure the financing required for the in-house gas central heating works required to accompany a fuel poor gas connection. The poorest households cannot self-fund a new heating system and GDNs are cancelling economic connections that could lift vulnerable households out of fuel poverty.

Our report found that a general downturn in gas connections to fuel poor homes is taking place, with the problem particularly acute in England. At the half way point of Ofgem's RIIO-GD1 target of 91,203 connections, GDNs have completed only 44% of connections targeted for England. By contrast, over 70% of the sub-targets for Scotland and Wales have been achieved. This disparity is in part due to a more attractive funding landscape in the devolved nations. This includes opportunities to secure funding for first time gas central heating through the Warmer Homes Scotland, Nest and Arbed schemes. In England, no similar publicly-funded schemes for domestic energy efficiency are available. Furthermore, CHF – which was a welcome intervention by the UK Government and helped address the funding gap for first time central heating in England – is closing down delivery in early 2017. No UK Government funds have been committed to continue or replace the scheme.

Looking forward, over the next 18 months under ECO2T, more than 80% of Affordable Warmth measures modelled for uptake are insulation. Insulation can complement but cannot replace a gas connection and central heating system as the most cost-effective solution to fuel poverty for many off-gas homes. In the absence of ECO funding, NEA estimates a gap of £43.5 million exists over the ECO transition period for gas central heating measures to complete fuel poor connections required by Ofgem. To meet Ofgem's target but also make progress toward more pressing national fuel poverty targets, including the UK Government's interim 2020 milestone in England, immediate funds are required to address this gap. If these funds are not forthcoming and lessons are not learned by the UK Government to inform the design of the future fuel poverty obligation then some of the poorest, most vulnerable and most isolated members of our society will be left paying more for less in an off-gas home.

Recommendations

1. *The UK Government should make immediate funds available for first time gas central heating systems to complete economic gas connections to fuel poor homes. This proposed non-gas fund should:*
 - A. *Address an estimated £43.5 million funding gap for first time gas central heating in off-gas households over the ECO2T transition period, April 2017 to September 2018. NEA recommends setting the fund at £25 million per annum, reserving £37.5 million to help cover the ECO2T gap and, over the longer term, giving consideration to extending the fund in order to help address a £1 billion funding gap that currently exists to meet the 2020 fuel poverty milestone in England.*
 - B. *Be made available in the UK Government's spring 2017 budget. Our report found supplier-funded obligations have not been successful in supporting heating measures for fuel poor and low income off-gas homes. Instead, public funding is needed.*
 - C. *Be restricted to private tenure low income and fuel poor households in England and Wales. Misalignment of ECO and closure of CHF has created an acute funding gap in England for heating measures to support gas connections to fuel poor homes. Private tenure households are particularly vulnerable; often unable to self-finance heating systems or access third party schemes reserved for social housing.*
 - D. *Leverage in third party funds to install insulation at the same time as gas central heating, where cost-effective. ECO and other third party funds should be targeted for complementary insulation measures. This approach will help maximise household bill savings along with contributing to energy efficiency targets in England.*
 - E. *Consider what lessons can be learned from CHF to inform delivery. This includes how GDNs and local authorities can work together to deliver a streamlined customer journey that progresses smoothly from identification and eligibility check, to installation, advice and onward referrals.*
2. *The Department of Business and Industrial Strategy should align the future fuel poverty supplier obligation running from 2018-2022 with fuel poor gas connections required over this time period by Ofgem. This alignment should:*
 - A. *Set a minimum target for installation of new central heating systems in non-gas properties that do not have one. The proposed target will help secure delivery of cost-effective measures and fuel switching to low income off-gas households historically ignored under Affordable Warmth; redressing the balance of bill savings for these homes. NEA recommends setting the target at a level broadly equivalent to minimum delivery currently required under ECO for solid wall insulation and rural areas.*

- B. *Place a cap on social housing and prioritise private tenure homes for receipt of central heating systems under the minimum target, in order to steer support to households living in the severest fuel poverty and contribute to meeting minimum energy efficiency standards applying to the private rented sector in England and Wales.*

- C. *Encourage suppliers and GDNs to co-fund gas solutions for fuel poor homes by addressing barriers in the alignment of existing ECO with FPNES. This includes a poor customer journey due to recurring and competing household and property eligibility checks.*

- D. *Make better use of data matching and data sharing, along with any future flexible eligibility mechanism, to identify vulnerable non-gas homes living in the worst properties.*

7. References

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8. Appendices

Annex A. Fuel Poor Network Extension Scheme household eligibility criteria

Criteria as of 1 April 2016

Households will qualify for the network extension scheme if they:

- reside within the 25% most deprived areas, as measured by the Government's Index of Multiple Deprivation (IMD). The IMD is defined separately for England, Scotland and Wales. Therefore, for example, a Welsh household will qualify if it falls within one of the 25% most deprived areas in Wales as measured by the Welsh Index of Multiple Deprivation (WIMD), or
- are eligible for measures under HHCRO (England, Wales and Scotland), Nest (Wales) or the Home Energy Efficiency Programmes for Scotland, or
- are in fuel poverty based on the latest definition/indicator. England uses the Low Income High Cost Indicator. Under this definition a household is considered to be fuel poor where:
 - its income is below the poverty line (taking into account energy costs); and
 - its energy costs are higher than is typical for its household type.

For devolved administrations, the definition in use at the time of application for a connection under the Scheme should be used.

Source: The findings of our review of the Fuel Poor Network Extension Scheme (Ofgem, 2015a)



Action for Warm Homes

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